Space Weather Forecast

Issued on Saturday, 06 April 2024 at 13:08 Local

This forecast provides a four day assessment of space weather events. The probabilities stated below are for reaching or exceeding the given levels. For more information about space weather impacts please see the Met Office Space Weather Scales https://www.metoffice.gov.uk/weather/learn-about/space-weather/uk-scales

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Space Weather Forecast Headline: No significant activity forecast.

Analysis of Space Weather Activity over past 24 hours

Solar Activity: Solar activity was Low. There are six sunspot regions on the visible disc. One slightly complex region in the northwest showing recent slight growth in areal extent. The large region in the northeast remains simple and inactive. A new region has rotated onto the southeast of the disk but appears simple at present. All other regions are small and simple.

No Earth-directed coronal mass ejections have been observed.

Solar Wind / Geomagnetic Activity: Solar wind speeds were steady until 06/0145UTC, when a suspected minor transient increased speeds but remained at slightly elevated. Total magnetic field strength was mostly Weak, with brief periods of Moderate between 06/0000-0400UTC, and a peak observed at 06/0215UTC. The north-south component remained weak but mostly negative throughout. Geomagnetic activity was Quiet to Unsettled (Kp 1-3).

Energetic Particles / Solar Radiation: The count rate of energetic particles (high energy protons) was at background levels with no solar radiation storms observed.

Four-Day Space Weather Forecast Summary

Solar Activity: Low to Very Low activity is expected through the period, with a slight chance of isolated Moderate activity.

Solar Wind / Geomagnetic Activity: No Earth-directed coronal mass ejections have been observed. Solar wind speeds are slightly elevated from waning high speed stream and weak transients, and should generally decline. The next enhancement is a coronal hole, this most probably connecting on 08 Apr.

Geomagnetic activity is forecast to be mainly Quiet to Unsettled through 06 Apr, but with a decreasing chance of Unsettled intervals into 07 Apr. There may be a further risk of Unsettled to Active intervals and a slight chance of G1/Minor geomagnetic storms on 08 and 09 Apr due to the connection to a coronal hole high speed stream.

Energetic Particles / Solar Radiation: The count rate of energetic particles (high energy protons) is expected to remain at background levels.

Issued by Met Office Space Weather Advisor, Tel: +44 (0) 330 135 4254 Email: moswoc@metoffice.gov.uk

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Geomagnetic Storms:

Geo-Magnetic Storm Probability (Exceedance)	Level	Past 24 Hours (Yes/No)	Day 1 (00-24 UTC) (%)	Day 2 (00-24 UTC) (%)	Day 3 (00-24 UTC) (%)	Day 4 (00-24 UTC) (%)
Minor or Moderate	G1 to G2	No	1	1	10	5
Strong	G3	No	1	1	1	1
Severe	G4	No	1	1	1	1
Extreme	G5	No	1	1	1	1

Radio Blackouts - X Ray Flares:

X Ray Flares Probability	Level	Past 24 Hours (Yes/No)	Day 1 (00-24 UTC) (%)	Day 2 (00-24 UTC) (%)	Day 3 (00-24 UTC) (%)	Day 4 (00-24 UTC) (%)
Active	R1-R2 M Class	No	20	20	20	20
Very Active	R3 to R5 X	No	1	1	1	1

Solar Radiation Storms - (High Energy Protons):

Radiation Storms Probability (Exceedance)	Level (cm^{-2} sr^{-1} s^{-1})	Past 24 Hours (Yes/No)	Day 1 (00-24 UTC) (%)	Day 2 (00-24 UTC) (%)	Day 3 (00-24 UTC) (%)	Day 4 (00-24 UTC) (%)
Active	≥ S1	No	1	1	1	1
Very Active	≥ S3 *	No	1	1	1	1

* S3 ≥ 10 MeV ≥ 1000 pfu and / or ≥ 50 MeV ≥ 10 pfu. (pfu = $cm^{-2}sr^{-1}s^{-1}$)

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